

Applicant : Christopher W. Smith  
Serial No. : 09/852,461  
Filed : May 9, 2001  
Page : 2 of 9

Attorney's Docket No.: 05542-423001 / 4399/CMP

### Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

### Listing of Claims:

1. (Currently Amended) A method of chemical mechanical polishing, comprising:  
contacting a substrate with a generally linear fixed-abrasive polishing sheet releasably  
secured to a first platen, the polishing sheet having a width greater than a diameter of the  
substrate;

supplying a first polishing liquid to the polishing sheet, wherein the first polishing  
liquid includes at least one chemically-reactive agent;

creating relative motion between the substrate and the polishing sheet to polish the  
substrate;

incrementally advancing the polishing sheet in a linear direction across the top  
surface of the first platen after polishing at the first platen;

contacting a the substrate with a generally circular fixed-abrasive polishing pad  
secured to a second platen;

supplying a second polishing liquid to the polishing pad, wherein the second  
polishing liquid includes at least one chemically-reactive agent; and

rotating the second platen to create relative motion between the substrate and the  
polishing pad to ~~polishing~~ the substrate.

2. (Currently Amended) A method of chemical mechanical polishing, comprising:  
contacting a substrate with a generally linear non-fixed-abrasive polishing sheet  
releasably secured to a first platen, the polishing sheet having a width greater than a diameter of  
the substrate;

supplying a first polishing liquid to the polishing sheet, wherein the first polishing  
liquid includes at least one chemically-reactive agent;

creating relative motion between the substrate and the polishing sheet to polish the  
substrate;

Applicant : Christopher W. Smith  
Serial No. : 09/852,461  
Filed : May 9, 2001  
Page : 3 of 9

Attorney's Docket No.: 05542-423001 / 4399/CMP

incrementally advancing the polishing sheet in a linear direction across the top surface of the first platen after polishing at the first platen;  
contacting a the substrate with a generally circular polishing pad secured to a second platen;  
supplying a second polishing liquid to the polishing pad, wherein the second polishing liquid includes at least one chemically-reactive agent; and  
rotating the second platen to create relative motion between the substrate and the polishing pad to polishing the substrate.

3. (Original) The method of claim 2, wherein the circular polishing pad comprises a fixed-abrasive polishing material.
4. (Original) The method of claim 2, wherein the circular polishing pad comprises a non-fixed-abrasive polishing material.
5. (Currently Amended) A method of chemical mechanical polishing, comprising:  
contacting a substrate with a generally circular polishing pad secured to a first platen;  
supplying a first polishing liquid to the generally circular polishing pad, wherein the first polishing liquid includes at least one chemically-reactive agent;  
rotating the ~~second~~ first platen to create relative motion between the substrate and the polishing pad to polishing the substrate;  
following polishing at the first platen, contacting a the substrate with a generally linear polishing sheet releasably secured to a second platen, the polishing sheet having a width greater than a diameter of the substrate;  
supplying a second polishing liquid to the polishing sheet, wherein the second polishing liquid includes at least one chemically-reactive agent;  
creating relative motion between the substrate and the polishing sheet to polish the substrate; and  
incrementally advancing the polishing sheet in a linear direction across the top surface of the second platen after polishing at the second platen.

Applicant : Christopher W. Smith  
Serial No. : 09/852,461  
Filed : May 9, 2001  
Page : 4 of 9

Attorney's Docket No.: 05542-423001 / 4399/CMP

6. (Original) The method of claim 5, wherein the polishing pad comprises a fixed-abrasive polishing material.
7. (Original) The method of claim 6, wherein the polishing sheet comprises a fixed-abrasive polishing material.
8. (Original) The method of claim 6, wherein the polishing sheet comprises a non-fixed-abrasive polishing material.
9. (Original) The method of claim 5, wherein the polishing pad comprises a non-fixed-abrasive polishing material.
10. (Original) The method of claim 9, wherein the polishing sheet comprises a fixed-abrasive polishing material.
11. (Original) The method of claim 9, wherein the polishing sheet comprises a non-fixed-abrasive polishing material.
12. (Currently Amended) A method of chemical mechanical polishing, comprising:  
contacting a substrate with a first generally linear polishing sheet releasably secured to a first platen, the first polishing sheet having a width greater than a diameter of the substrate;  
supplying a polishing liquid to the polishing sheet, wherein the polishing liquid includes at least one chemically-reactive agent;  
creating relative motion between the substrate and the first polishing sheet to polish the substrate;  
incrementally advancing the first polishing sheet in a linear direction across the top surface of the first platen after polishing at the first platen;

Applicant : Christopher W. Smith  
Serial No. : 09/852,461  
Filed : May 9, 2001  
Page : 5 of 9

Attorney's Docket No.: 05542-423001 / 4399/CMP

contacting a the substrate with a second generally linear polishing sheet releasably secured to a second platen, the second polishing sheet having a width greater than a diameter of the substrate;

supplying a polishing liquid to the polishing sheet, wherein the polishing liquid includes at least one chemically-reactive agent;

creating relative motion between the substrate and second polishing sheet to polish the substrate; and

incrementally advancing the second polishing sheet in a linear direction across the top surface of the second platen after polishing at the second platen;

wherein the first polishing sheet and the second polishing sheet include a fixed-abrasive polishing sheet and a non-fixed abrasive polishing sheet.

13. (Original) The method of claim 12, wherein the first polishing sheet comprises a fixed-abrasive polishing material and the second polishing sheet comprises a non-fixed abrasive polishing material.

14. (Original) The method of claim 12, wherein the first polishing sheet comprises a non-fixed-abrasive polishing material and the second polishing sheet comprises a fixed abrasive polishing material.

15. (Withdrawn) An apparatus for polishing a substrate, comprising:

a first polishing station including a first platen, a generally linear fixed-abrasive polishing sheet releasably secured to the first platen, the polishing sheet having a width greater than a diameter of the substrate, and a drive mechanism to incrementally advance the polishing sheet in a linear direction across the top surface of the first platen;

a second polishing station including a rotatable second platen and a generally circular fixed-abrasive polishing sheet secured to the second platen;

a substrate transfer station;

a substrate carrier mechanism; and

Applicant : Christopher W. Smith  
Serial No. : 09/852,461  
Filed : May 9, 2001  
Page : 6 of 9

Attorney's Docket No.: 05542-423001 / 4399/CMP

a controller configured to cause the substrate carrier mechanism to transport the substrate from the transfer station to the first polishing station, from the first polishing station to the second polishing station after the substrate has been polished at the first polishing station, and from the second polishing station to the transfer station after the substrate has been polished at the second polishing station.

16. (Withdrawn) An apparatus for polishing a substrate, comprising:

a first polishing station including a first platen, a generally linear non-fixed-abrasive polishing sheet releasably secured to the first platen, the polishing sheet having a width greater than a diameter of the substrate, and a drive mechanism to incrementally advance the polishing sheet in a linear direction across the top surface of the first platen;

a second polishing station including a rotatable second platen and a generally circular fixed-abrasive polishing sheet secured to the second platen;

a substrate transfer station;

a substrate carrier mechanism; and

a controller configured to cause the substrate carrier mechanism to transport the substrate from the transfer station to the first polishing station, from the first polishing station to the second polishing station after the substrate has been polished at the first polishing station, and from the second polishing station to the transfer station after the substrate has been polished at the second polishing station.

17. (Withdrawn) The apparatus of claim 16, wherein the circular polishing pad comprises a fixed-abrasive polishing material.

18. (Withdrawn) The apparatus of claim 16, wherein the circular polishing pad comprises a non-fixed-abrasive polishing material.

19. (Withdrawn) An apparatus for polishing a substrate, comprising:

a first polishing station including a rotatable first platen and a generally circular polishing sheet secured to the first platen;

Applicant : Christopher W. Smith  
Serial No. : 09/852,461  
Filed : May 9, 2001  
Page : 7 of 9

Attorney's Docket No.: 05542-423001 / 4399/CMP

a second polishing station including a second platen, a generally linear non-fixed-abrasive polishing sheet releasably secured to the second platen, the polishing sheet having a width greater than a diameter of the substrate, and a drive mechanism to incrementally advance the polishing sheet in a linear direction across the top surface of the second platen;

a substrate transfer station;

a substrate carrier mechanism; and

a controller configured to cause the substrate carrier mechanism to transport the substrate from the transfer station to the first polishing station, from the first polishing station to the second polishing station after the substrate has been polished at the first polishing station, and from the second polishing station to the transfer station after the substrate has been polished at the second polishing station.

20. (Withdrawn) The apparatus of claim 19, wherein the polishing pad comprises a fixed-abrasive polishing material.

21. (Withdrawn) The apparatus of claim 20, wherein the polishing sheet comprises a fixed-abrasive polishing material.

22. (Withdrawn) The apparatus of claim 20, wherein the polishing sheet comprises a non-fixed-abrasive polishing material.

23. (Withdrawn) The apparatus of claim 19, wherein the polishing pad comprises a non-fixed-abrasive polishing material.

24. (Withdrawn) The apparatus of claim 23, wherein the polishing sheet comprises a fixed-abrasive polishing material.

25. (Withdrawn) The apparatus of claim 23, wherein the polishing sheet comprises a non-fixed-abrasive polishing material.

Applicant : Christopher W. Smith  
Serial No. : 09/852,461  
Filed : May 9, 2001  
Page : 8 of 9

Attorney's Docket No.: 05542-423001 / 4399/CMP

26. (Withdrawn) An apparatus for polishing a substrate, comprising:  
a first polishing station including a first platen, a first generally linear polishing sheet releasably secured to a platen, the first polishing sheet having a width greater than a diameter of the substrate, and a drive mechanism to incrementally advance the first polishing sheet in a linear direction across the top surface of the first platen;

a second polishing station including a second platen, a second generally linear polishing sheet releasably secured to the second platen, the second polishing sheet having a width greater than a diameter of the substrate, and a drive mechanism to incrementally advance the second polishing sheet in a linear direction across the top surface of the second platen;

a substrate transfer station;

a substrate carrier mechanism; and

a controller configured to cause the substrate carrier mechanism to transport the substrate from the transfer station to the first polishing station, from the first polishing station to the second polishing station after the substrate has been polished at the first polishing station, and from the second polishing station to the transfer station after the substrate has been polished at the second polishing station;

wherein the first polishing sheet and the second polishing sheet include a fixed-abrasive polishing sheet and a non-fixed abrasive polishing sheet.

27. (Withdrawn) The apparatus of claim 26, wherein the first polishing sheet comprises a fixed-abrasive polishing material and the second polishing sheet comprises a non-fixed abrasive polishing material.

28. (Withdrawn) The apparatus of claim 26, wherein the first polishing sheet comprises a non-fixed-abrasive polishing material and the second polishing sheet comprises a fixed abrasive polishing material.